RIVERS AND FLOODS

By Montrose W. Hayes

[In charge River and Flood Division]

The most noteworthy floods in June were in the North Canadian River in Oklahoma and the Columbia River in

Oregon and Washington.
On the night of June 2-3 heavy rains occurred in the lower part of the North Canadian River Valley, over a belt about 30 miles wide and 70 miles long. The average of the rain recorded by the three gages in the belt was 7.75 inches; this amount fell in the nine hours beginning at 9 p. m. of June 2. As the rain occurred at night no warnings of the flood were distributed. Nine persons were drowned.

The flood in the Columbia River was caused by melting snow. By the end of March the accumulated snowfall over the drainage area was the greatest since 1928, and in many places it was the greatest in the last 10 years. The snow melted gradually, however, and the crest this year in the lower Columbia was not much greater than the average annual spring crest.

Table of flood stages in June, 1932 [All dates in June unless otherwise specified]

River and station	Flood	Above stages-		Crest		
Atver and station	stage	From-	то—	Stage	Date	
ATLANTIC SLOPE DRAINAGE						
Cape Fear: Elizabethtown, N. C Santee: Rimini, S. C Savannah: Ellenton, S. C	Fect 22 12 14	14 14 14	16 18 25	Feet 23. 4 13. 4 18. 0	15 16 20	
MISSISSIPPI SYSTEM						
Upper Mississippi Basin						
Des Moines: Boone, Iowa Ottumwa, Iowa	20 9	19 27	19 27	20.1 9.8	19 27	
Missouri Basin						
Floyd: Merrill, IowaGrand:	13	9	9	15.0	8	
Gallatin, Mo Chillicothe, Mo	20 18	3 4	5 6	26. 7 24. 55	4 5	
Brunswick, Mo	12	$ \begin{cases} 5 \\ 21 \end{cases} $	7 26	13. 2 13. 8	6 24	
Osage: Quenemo, Kans Missouri: Waverly, Mo	30 23	21 21	21 24	30. 44 24. 0	21 23	
Arkansas Basin						
Neosho: Le Roy, Kans North Canadian:	18	22	22	18. 2	22	
Woodward, Okla	6	27 28	27 28	6.8	27 28	
Canton, Okla Oklahoma City, Okla	10	3	3	6. 3 13. 3	3	
WEST GULF OF MEXICO DRAINAGE		ĺ				
Pecos: Fort Sumner, N. Mex	5	28	28	5. 2	28	
GULF OF CALIFORNIA DRAINAGE						
Roaring Fork: Carbondale, Colo	5	{ 16 22	18 28	5.3 5.6	16 25	
Colorado: Parker, Ariz Yuma, Ariz	7 28	May 1	(1) 5	12. 0 28. 4	May 30-31 4-5	
PACIFIC SLOPE DRAINAGE					•	
Columbia Basin						
Marcus, WashVancouver, Wash		May 7 May 10	(1) (1)	35. 0 21. 6	18, 19, 26, 27 May 25	

¹ Continued into July.

Statement of flood losses

MISSISSIPPI SYSTEM

τ	UPPER	MISSI	SSIPPI	BAS	in-des	MOINES	RIVER	IN	IOWA	
Tangib	ole pro	perty	totally	or	partial	ly destro	yed		\$24,	000

Tangible property totally or partially destroyed	\$24,000
Matured crops	42, 600 1, 000
Missouri Basin	
FLOYD RIVER IN IOWA	
Tangible property totally or partially destroyed Matured crops	2, 000 1, 000 100
GRAND RIVER IN MISSOURI	
Tangible property totally or partially destroyed Matured crops	150 450 18, 900 200 5, 100
MISSOURI RIVER IN MISSOURI	
Prospective crops (200 acres)Suspension of business, including wages of employees	1, 500 500
ARKANSAS BASIN	
NORTH CANADIAN RIVER IN OKLAHOMA	
Tangible property totally or partially destroyed Matured crops	80, 000 235, 000
GULF OF CALIFORNIA DRAINAGE	
COLORADO RIVER IN CALIFORNIA	
Tangible property totally or partially destroyed Matured crops Prospective crops (100 acres) Livestock and other movable property Suspension of business, including wages of employees PACIFIC SLOPE DRAINAGE	10, 000 100 1, 000 1, 000 200
COLUMBIA BASIN	
KOOTENAI RIVER IN IDAHO	
Tangible property totally or partially destroyed Prospective crops	7, 500 13, 200
COLUMBIA RIVER IN OREGON AND WASHINGTON	
Tangible property totally or partially destroyed	8, 600 13, 700 11, 800 500 28, 000
Estimated value of property saved by warnings	
Grand River in Missouri	1, 500 1, 000 5, 000 256, 9 20